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WHAT THE ILLINOIS SECTION HAS DONE AND CAN DO¹

BY PAUL HANSEN

In the endeavor to find something appropriate to say as chairman of the Illinois Section of the American Water Works Association, it occurred to me that I might get some inspiration from a retrospect of the work that our organization has already performed. A count of the papers that have been presented showed that in all there are about 207, including those on the program for the present meeting. These papers cover a great variety of water works subjects and some that are not strictly water works subjects. An analysis of the number of papers devoted to each subject should prove interesting as an indication of our trend as an organization. It was not possible to classify the papers accurately according to subjects, because many of them dealt with or touched upon several different topics, but it was possible, in a general way, to divide the papers into a number of different groups.

By far the largest group is that comprising papers on water purification. There was a total of 45 papers almost equally divided between filtration and sterilization, 23 of the former and 22 of the latter. The next largest group, comprising 23 papers, is one closely allied to water purification, namely, that group which comprises papers on chemicals, chemistry and analytical methods.

When one considers that in the State of Illinois, there are about 340 water works and only about 36 furnish purified supplies and perhaps 25 more furnish water which should be purified by some means or other, it would seem that possibly a disproportionate amount of attention is being devoted to this special phase of the water works field. The intimate relation between public water supplies and the public health is so great that the necessity of delivering to the public a safe water supply cannot be over emphasized, but we must also take into consideration that if our organization is to be of advantage to the greatest number of water works men, it is important that our efforts be so balanced as to interest all.

¹Annual address of the Section Chairman, delivered before the Illinois Section at Urbana on March 13, 1917.

There were 15 papers that could not be classified under any special subject and had to be termed "general." They related for the most part to the development and management of water works as a whole. These papers are very valuable and interesting, but, generally speaking, it is believed that they could be made of greater value if their substance were directed to one main theme, thereby rendering them more suitable for reference.

Water pollution is represented by 14 papers, most of which have only an indirect relation to water supply problems. A number of them describe interesting and unusual ways in which water supplies may become contaminated, but most relate to nuisances and other evil results from stream pollution.

Papers on ground waters and ground water development comprise a group of 13, practically all of which are very interesting and valuable. It would seem that in view of the great preponderance of ground water supplies in Illinois and also in view of some of the peculiar and unusual characteristics of Illinois ground water resources, that problems relating to ground waters would command much greater attention.

The next group of considerable size is one relating to pumps and pumping stations. This group also seems disproportionately small when one considers that the operation of pumps and the management of pumping stations constitute one of the very large items of expense in water works maintenance. In view of the dilapidated condition of the great majority of pumping stations in small communities, the desirability for a larger number of papers relating to pumps and pumping stations becomes all the more apparent.

Eight papers are devoted to state supervision and regulation of water supplies, covering the matters of accounting, service, rates and sanitary quality. In view of the large amount of attention that has been given to the control of public utilities in recent years, it seems somewhat strange that there have not been more papers on this subject, but perhaps the deficiency is met by the great amount of attention given the subject by our national organization.

Water softening has to its credit 7 papers, which is a goodly number. However, it is probable that the water works literature will be augmented by much more material on water softening within the next ten to fifteen years, as water softening seems to be the logical next step in water refinement.

Pipes and piping receive attention from 6 papers, which is a

rather small number, considering the important factor in water works practice represented by the piping system.

Five papers each were devoted to iron removal, railway water supplies, reservoirs and dams, water waste and leakage. Four papers each, were devoted to hydraulics, fire protection and meters. Three papers each were devoted to water rates, sewage disposal and the business management of water works. Two papers each were devoted to house services, anchor ice and valuation of water works utilities. One paper each was devoted to franchises, swimming pools, color removal, hydrotherapy, vital statistics, flood control, materials of construction used in water works practice, publicity in connection with water works, and use of water in industries.

Among the subjects that received this scanty attention from our section, there are some that are deserving of much more recognition. Notable among these are, business management of water works, publicity in connection with water works, house services, water rates, reservoirs and dams, water waste and leakage, and meters. The importance of these subjects is self-evident to men of the water works fraternity, but it may not be amiss to dwell on one or two of these items.

In my own experience in traveling about the state I have been especially impressed with the exceedingly slipshod manner in which water works properties are operated, especially in the smaller communities. Some of these water works constitute a great menace to public health, while all of them give poor service and the great majority of them are costly to operate. The difficulty lies, especially in the small municipally owned properties, in securing competent supervision. This is no reflection upon the character of these communities or the people in them. The trouble is due to the fact that a small community cannot afford to employ the high grade men that are engaged in operating the larger installations, and then, too, there is general lack of appreciation in the smaller communities of good business management and efficiency in operation. To me it appears that the relief must come from the outside and it must be afforded at a small cost. State agencies can do much in an educative way, and in the cases of water supply that, through improper operation, may constitute a menace to public health, it is possible for the state to demand and enforce at least enough good operation to insure the water being of safe quality. But the most readily available assistance is that of practicing engineers at present

engaged in the design and construction of water works. They should extend their function to cover the field of operation and should actively offer their services on an annual fee basis for supervising the operation of water works plants.

This service can take the form perhaps of quarterly visits to the plant and the receipt at least monthly of operating records made out on forms to be prescribed by the engineers. Such service will not only greatly improve operation, but it will improve design as well. Under present circumstances, an engineer has little opportunity to ascertain how his designs work out in practice, unless he is willing to revisit his works at his own expense. The arrangement will also be of material financial advantage to engineers in that it will assure them of a steady income for taking care of over-head expenses.

Water works properties are far behind other utilities in the matter of publicity. In 1915, there was a very excellent paper read before this section on the practical value of publicity to water works men by S. C. Hadden, and I regret to note that his very excellent suggestions did not arouse more active interest on the part of our membership. Among the methods whereby water works publicity can be conducted, he mentioned, first, the preparation of readable annual reports; second, the preparation of pamphlets on special subjects for distribution among water takers; third, the preparation of reading matter for publication in local papers; fourth, formal advertising; fifth, circularizing lists of prospective customers; sixth, making addresses before gatherings of people in the locality served; seventh, holding departmental meetings; eighth, the use of hand bills and posters; and ninth, identification and participation in the activities of associations of water works men. In the matter of publicity, much greater advance has been made in connection with other public utilities than with water works. The attitude of the water works men has been too often that the public must have water and, therefore, the business does not require boosting. While this is in a measure true, there is no doubt but what a better feeling could be developed between the public and the water works industry than now exists. Further, a much greater use of water could be stimulated just as there is now being stimulated a greater use of electricity and gas, commodities which are in no sense necessities, as is water, and finally it is of very great importance to the public health where water works exist and where the water is of pure quality that the public supply be used in preference to private wells which are almost certain to become contaminated in urban districts.

Many of the experiences of water works men in connection with the subjects that I have mentioned as not having received the attention their importance demands are of a character that do not seem to warrant the preparation of a paper, yet could be most advantageously taken up as an informal discussion. The need for such informal discussions is amply attested by the popularity that round-table discussions have recently developed. Accordingly, I think that a much greater proportion of our meetings should be given up to round-table discussions on announced subjects and instead of striving to secure a large number of papers, we should bend our efforts to securing a large number of very short discussions on a variety of timely topics. Moreover, it is particularly appropriate that such discussions should take place in the sectional meetings of the American Water Works Association, because these sections have been formed for the very purpose of promoting a closer acquaintanceship in their respective localities and for affording an opportunity for greater freedom of expression than is possible at the national conventions.